Patent Claims

1. Substrates which have been surface-modified by means of colorants, characterised in that they are encased with one or more layers of immobilised LCST and/or UCST polymers.

2. Substrates which have been surface-modified by means of colorants according to Claim 1, characterised in that the polymer encasing has layer thicknesses of 2 - 500 nm.

3. Substrates which have been surface-modified by means of colorants according to Claim 1 or 2, characterised in that the LCST polymers are selected from the group consisting of polyalkylene oxide derivatives, olefinically modified PEO-PPO copolymers, polymethyl vinyl ether, poly-N-vinylcaprolactam, ethyl(hydroxyethyl)celluloses, poly(N-isopropylacrylamides) and polysiloxanes, and mixtures thereof.

4. Substrates which have been surface-modified by means of colorants according to Claim 1 or 2, characterised in that the UCST polymers are selected from the group consisting of polystyrenes, polystyrene copolymers and polyethylene oxide copolymers, or mixtures thereof.

5. Substrates which have been surface-modified by means of colorants according to one of Claims 1 to 3, characterised in that the LCST polymer is a polysiloxane which has been modified by means of olefinic groups or is a polyether.

6. Substrates which have been surface-modified by means of colorants according to one of Claims 1 to 5, characterised in that the polymer encasing additionally comprises nanoparticles, polymerisable monomers, plasticisers, antioxidants, carbon black particles, microtitanium or mixtures thereof.

7. Substrates which have been surface-modified by means of colorants according to Claim 6, characterised in that the polymer encasing

comprises from 0.001 to 150% by weight of additives, based on the polymer employed.

8. Substrates which have been surface-modified by means of colorants according to one of Claims 1 to 7, characterised in that the substrates are holographic pigments, pearlescent pigments, interference pigments, multilayered pigments, metal-effect pigments, gonio-chromatic pigments, BiOCl pigments, mica, Al_2O_3 flakes, glass flakes and/or SiO_2 flakes.

9. Substrates which have been surface-modified by means of colorants according to Claim 8, characterised in that the effect pigments are based on natural or synthetic mica, Al_2O_3 flakes, TiO_2 flakes, SiO_2 flakes, Fe_2O_3 flakes, glass flakes, ceramic flakes or graphite flakes.

10. Substrates which have been surface-modified by means of colorants according to one of Claims 1 to 9, characterised in that the colorants are Cu Phthalocyanine Blue, Heliogen Blue, Carmine Red, Berlin Blue, azo pigments, azo dyes, perylene pigments, liquid crystal polymers, fluorescent pigments or mixtures thereof.

11. Process for the preparation of substrates which have been surface-modified by means of colorants according to Claim 1, characterised in that the LCST and/or UCST polymer is applied to the substrate surface and irreversibly immobilised by precipitation in water and/or an organic solvent.

12. Process according to Claim 11, characterised in that conventional additives are added to the polymer.

13. Use of the substrates which have been surface-modified by means of colorants according to Claim 1 in surface coatings, water-borne coatings, powder coatings, paints, printing inks, security printing inks, plastics, concrete, in cosmetic formulations, in agricultural sheeting and tarpaulins, for the laser marking of papers and plastics, for laser

welding, as light protection, as pigment for corrosion protection and for the preparation of pigment compositions and dry preparations.

14. Formulations comprising the surface-modified substrates according to Claim 1.